

### Abstract

The present invention relates to an improved process for preparing levosalbutamol or the pharmacologically acceptable salts thereof on an industrial scale, using asymmetric hydrogenation as the key step and optionally a special sequence of subsequent steps, using rhodium as catalyst and a chiral bidentate phosphine ligand such as (2R, 4R)-4-(dicyclohexylphosphino)-2-(diphenyl-phosphino-methyl)-N-methyl-aminocarbonyl-pyrrolidine as catalyst system.